

10/541,199
In re Yukihiro HIRAI

IN THE DRAWINGS

Applicant has submitted Replacement Drawings for Figures 7a, 7b, 7c and 8 adding the legend “Prior Art” because these drawings depict the structure of the prior art.

Applicant has further amended the drawings to include a new Figure 1c that illustrates an alternate embodiment of the claimed invention where the arch shaped cross section is formed on the micro contacting pieces 6 rather than the micro contacting terminals 8. No new matter is entered because the original specification at page 15, lines 25-28 describes the claimed arrangement – now illustrated in new Figure 2c.

REMARKS

The Examiner is thanked for the Official Action dated July 2, 2007. The above amendments and remarks to follow are intended to be fully responsive to the issues presented in that Action.

The drawings were objected to for failing to include the legend "Prior Art" on Figures 7a-7c and 8. Further, the drawings were objected to for failing to illustrate the subject matter of claims 1-3. Applicant has submitted Replacement Drawings for Figures 7a, 7b, 7c and 8 adding the legend "Prior Art" because these drawings depict the structure of the prior art. Applicant has further amended the drawings to include a new Figure 2c that illustrates an alternate embodiment of the claimed invention where the arch shaped cross section is formed on the micro contacting terminals 6 rather than the micro contacting pieces 8. No new matter is entered because the original specification at page 15, lines 25-28 describes the claimed arrangement – now illustrated in new Figure 2c. Figure 2b has been amended to label the section for Figure 2c.

Claims 2 and 3 were objected to for the informality of not clearly describing where the arch shaped cross section finds its support. The claims were also rejected under 35 U.S.C. 112, second paragraph, for indefinite claim language. The claimed support can be found at page 15, lines 25-28, and Applicant has amended the claims to clearly describe the invention described in the original disclosure.

Applicant further notes that the FPC cable 7 is clearly described in the specification as a single element. The FPC cable is the same as the cable and the claims consistently recite this element without ambiguity.

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Claims 1-3 were rejected under 35 U.S.C. § 102(b) as being anticipated by Roberts (USP 6,074,220). Claims 4 and 5 were rejected under 35 U.S.C. 103 as being obvious over Roberts '220. These rejections are respectfully traversed in view of the foregoing amendments and the following comments.

Claim 1 has been amended to clarify that the present invention reduces the size of the connector by eliminating the housing 25 (see Prior Art Figure 7) conventionally disposed between the FPC cable and the printed circuit board. As stated at page 4 of the original specification, lines 12-19, to wit,

it is possible to connect the FPC cable direct to the printed circuit board and increase the connection terminals in large extent so that the width of the FPC cable can be shrunk down. The conventional parts which are used for the conventional technologies are not necessary and the height of the whole connector can be shrunk down to a half size of the conventional connector. Therefore, it is possible to provide high density FPC micro connectors.

This arrangement is not taught by the prior art. Roberts '220 teaches a housing 7 that is interposed between the FPC cable 4 and the printed circuit board 6.


Claim 3 has been amended into independent form to positively recite that the arch-shaped portion may be formed in either the micro contacting pieces 6 or the micro contacting terminals 8 to define salient contact edges (see 8a of Figure 6) that are adapted to elastically deform when said micro contacting terminals contact said micro contacting pieces. This structure may cut oxide covering film on the other surface to improve contact and reliability.

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New claims 6-7 have been added to clearly recite the structure where the FPC cable lies directly along the printed circuit board.

It is respectfully submitted that pending claims 1-7 define the invention over the prior art and are in condition for allowance. Notice to this effect is earnestly solicited. Should the Examiner believe additional discussion would advance the prosecution of the instant application, he is invited to contact the undersigned.

Respectfully submitted:

By: 
Matthew Stavish
Reg. No. 36,286

Berenato, White & Stavish
Suite 240
6550 Rock Spring Drive
Bethesda, MD 20817
301-896-0600